

SHAKHABUTDINOV, S.Sh.; RAKHMATOV, Kh.R.

"Forensic chemistry" by M.D.Shvaikova. Reviewed by S.Sh.Shakhabutdinov and Kh.R.Rakhmatov. Sud.-med. ekspert. 4 no.3:60 J1-S '61.

(MIRA 14:10)

(CHEMISTRY, FORENSIC)

(SHVAIKOVA, M.D.)

GEVORGYAN, B.; KRASNOKUTSKIY, I.; BUTNIKOV, N.; RAKHMATOV, M.

The seven-year plan in action. Mias. ind. SSSR 33 no.4:8-15 '62.
(MIRA 17:2)

1. Moskovskiy ordena Lenina myasokombinat (for Gevorgyan).
2. Kalininskiy sovet narodnogo khozyaystva (for Krasnokutskiy).
3. Upravleniye myasnoy i molochnoy promyshlennosti
Khersonskogo soveta narodnogo khozyaystva (for Butnikov).
4. Bukharskaya khladoboynya (for Rakhmatov).

RAKHMATOV, M.; ROZHDESTVENSKIY, P., red.; TROYANOVSKAYA, N., tekhn. red.

[Africa is striding toward freedom] Afrika idet k svobode. Moskva, Gos. izd-vo polit. lit-ry, 1961. 86 p. (MIRA 14:10)

1. Zamestitel' Predsedatelya Prezidiuma Verkhovnogo Soveta SSSR i Predsedatel' Prezidiuma Verkhovnogo Soveta Tadzhikskoy SSR (for Rakhmatov).
(Africa--Politics) (Africa--Economic conditions)

RAKHMATOV, M. N.

"Development of a Method of Luminescent Analysis of Petroleum Products."
Cand Phys-Math Sci, Central Asia U, Tashkent, 1953. (RZhFiz, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

RAKONATOVA, E.R.

A type of differential equation of infinite order with polynomial coefficients of increasing powers. Izv. AN Uz. SSR, Ser.fiz.-mat. nauk 9 no.6:20-29 '65. (MIRA 19:1)

1. Institut matematiki imeni Romanovskogo AN UzSSR. Submitted May 17, 1965.

USSR/Human and Animal Physiology (Normal and Pathological)
Blood. Form Elements.

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Abs Jour : Ref Zhur Biol., No 6, 1959, 26418
Author : Kakhatova, M.R.
Inst : -
Title : On the Problem of Influence of Nervous System on Blood Composition.
Orig. Pub : Byul. eksperim. biol. i med., 1958, 45, No 1, 38-41

Abstract : In 5 dogs "tugging" (T) according to the method of Speranski was applied as a stimulation of the nervous system. 30 minutes after T the content of Hb increased on the average by 5%, the number of erythrocytes (E) changed correspondingly also. The number of leucocytes reached 20 300 in 1 mm³, the number of reticulocytes (R) increased slower. Restoration of hematologic indexes was observed on 3-5th day. The results were compared with those obtained in intoxication of rats with phenylhydrazine (IP).

Card 1/2

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USSR/Human and Animal Physiology (Normal and Pathological)
Blood. Form Elements.

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APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001

Abs Jour : Ref Zhur Biol., No 6, 1959, 26418

Anemia developed on the 28-35th day as a result of IP. The amount of Hb fell to 27-29%, the number of E decreased correspondingly. The regenerating ability of bone marrow increased already on the 2-3rd day. In peripheral blood normoblasts appeared, the number of R increased sharply, neutrophilic leucocytosis with shift to the left developed. Restoration took place 39-46 days after IP. Then a second trauma was performed by means of T. This induced a repetition of all changes observed in IP. In 5 dogs, after T on the background of IP, reticulocytosis was, on the average, 4 times higher than in control T. This is apparently explained by preservation of trace conditions in the nervous system. -- E.R. Paley

Card 2/2

RAKIZATOVA, N.R.

Influence of the nervous system on the medullary hematopoiesis.
Biul. eksp. biol. i med. 52 no.7:45-48 JI '61. (MIRA 15:3)

1. Iz patofiziologicheskoy laboratorii (zaveduyushchiy - dotsent
A.Yu. Tilis) Uzbekskogo nauchno-issledovatel'skogo instituta
gematologii i perelivaniya krovi (direktor - kand.med.nauk
S. Agzamkhodzhaev, nauchnyy konsul'tant raboty - prof. I.T.
Kurtsin). Predstavlena akademikom V.N. Chernigovskim.

(NERVOUS SYSTEM)
(HEMOPOIETIC SYSTEM)

BAKIMATOVA, M.R.

Effect of the nervous system on blood composition [with summary
in English]. Biul. eksp. biol. i med. 45 no.1:38-41 Ja '58.
(MIRA 11:4)

1. Iz patofiziologicheskoy laboratorii (zav. - dotsent A.Yu.Tilis)
Uzbekakogo nauchno-issledovatel'skogo instituta perelivaniya krovi
(dir. - kandidat meditsinskikh nauk A.T.Astanov). Predstavlena
akademikom A.D.Speranskim.

(NERVOUS SYSTEM, physiology,
eff. on blood composition (Rus))
(BLOOD CELLS,
count, neural control (Rus))

RAKHMATULIN, A.T.

LARIONOV, A.S.; MYSOVSKAYA, Ye.I.; RAKHMATULIN, A.T. (g. Saratov)

Simplest apparatus for demonstrating the cracking of petroleum products. Khim.v shkole 9 no.5:55-56 S-0 '54. (MIRA 7:9)
(Chemistry--Experiments) (Cracking process)

RAKHMATULIN, Kh.A. (Moskva)

Theory of the formation of a textile fabric. Inzh.sbor.
27:5-16 '60. (MIRA 13:6)

(Weaving)

RAKHUMATULLIN, F. A.

the effect of fired clay on the setting of silicate cement.
F. A. Rakhmatullin and Z. P. Gordova. *Trudy Inst.
Khim., Akad. Nauk Kirgis. S.S.R.* 7, 51-6 (1966) (in Rus-
sian). -- The mech. strength of silicate cement, contg. 30-
60% of local clay fired for 4 hrs. at 750-850°, was lower in
the initial hardening period but became equal to or higher
than the final strength of the same cement without clay
added. The same clay, however, fired at temp. lower than
750° or higher than 850° acted only as a diluent for cement
similar to sand. R. S. Lubomirski

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15-57-3-3371

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3,
p 132 (USSR)

AUTHORS: Rakhmatullin, F. A., Gordova, Z. P.

TITLE: The Effect of Roasted Loess on the Hardening of Silicate
Cement (Vliyaniye obozhzhennykh lessov na tverdeniye
silikatnogo tsementa)

PERIODICAL: Tr. In-ta khimii AN KirgSSR, 1956, Nr 7, pp 51-56

ABSTRACT: The Kurmenty loess used in this study was roasted at
different temperatures, from 550° to 950°, for various
lengths of time. Dissociation of the carbonates in the
loess was effected chiefly in or below the temperature
interval 700° to 800°. Roasted loess is an activated
admixture. Silicate cement from the Vol'skiy factory,
type 250, was used for the bonding material. The most
favorable effect on the hardening of the cement was
exerted by loess heated to 750° and 850°. The roasted
loess constituted 30 to 50 percent of the mixture.

S. P. Sh.

Card 1/1

RAKHMATULLIN, F.A.

15
3
Hydrothermal processing of lime-clay mixtures. F. A. Rakhmatullin and Z. P. Gordova. *Trudy Inst. Khim., Akad. Nauk Kirgiz. S.S.R.* 7, 87-84 (1950) (in Russian).
Lime 5-8 and H₂O 12-13%, admixed to local clays, made a building material of good mech. properties. The mech. strength of test cubes was directly related to the pressure applied during shaping (100 to 300 atm.). Test samples were cured for 2 hrs. in 5-15 atm. steam. The mech. strength after 1 month was 10-30% higher than the strength measured after 3 days. R. S. Lubomirski

PM
1950

MELAMED, G.I.; KOGAN, S.M., redaktor; RAKHMATULLIN, F., tekhnicheskiiy redaktor

[Rapid technological preparation of machine shops for production]
Skorostnaia tekhnologicheskaiia podgotovka proizvodstva mekhanooobra-
tyvaiushchikh tsekhov. Tashkent, Gos. izd-vo Uzbekskoi SSR, 1955.
82 p. (MLRA 9:10)

(Machine-shop practice)

RAKHMATULLIN, P.A.; GORDOVA, Z.P.

Hydrothermal processing of a lino-loess mixture. Trudy Inst.khim.
AN Kir.SSR no.7:57-64 '56. (MIRA 10:3)
(Loess) (Lime) (Building materials)

RAKHMATULLIN, F.A.; GORIOVA, Z.P.

Effect of calcinated loesses on the hardening of silicate cement.
Trudy Inst.khim. AN Lir.SSR no.7:51-56 '56. (MLRA 10:3)
(Cement) (Loess)

RAKHMATULIN, P. A.

USSR

Loess cement from the loess of Maryinsk deposit. I. O. P. A. Rakhmatulin. *Trudy Inst. Khim., Kirgiz. Filial Akad. Nauk S.S.S.R.* 1953, No. 5, 67-72; *Referat. Zhur. Khim.* 1954, No. 56606. -- Loess of the Maryinsk deposit is highly dispersed and has a high carbonate content. Investigation was carried out on the production of a hydraulic bonding substance (loess cement) from Uzbek loess. The bonding properties of this cement are attributed to CaO , Al_2O_3 , and $\beta\text{-Al}_2\text{O}_3\cdot\text{SiO}_2$, which forms when loess is calcined at 1100-1200°C. M. Hoshch.

RAKHMATULLIN, G.I.

Results of improved organization of production. Bezop.truda v prom. 5
no.3:27 Mr '61. (MIRA 14:3)

1. Starshiy inzh. po tekhnike bezopasnosti neftepromyslov uprav-
leniya Aksakovneft'.

(Bashkiria--Oil fields--Safety measures)

RAKHMATULLIN, I.M. (Kazan')

Changes in lability of the nerve-muscle apparatus in anaphylaxis
[with summary in English]. Arkh.pat. 20 no.7:69-71 '58 (MIRA 11:9)

1. Iz kafedry patofiziologii (zav. - doktor med.nauk M.A. Yerzin)
Kazanskogo gosudarstvennogo meditsinskogo instituta.

(NERVE MUSCLE PREPARATION,

eff. of anaphylaxis in guinea pigs (Rus))

(ALLERGY, experimental,

eff. of anaphylaxis on nerve-musc. prep. in guinea pigs
(Rus))

RAKHMATULLIN, I.M. (Kazan')

Reflex activity of the spinal cord during stimulation of various parts of the central nervous system with an antigen [with summary in English]. Arkh.pst. 19 no.11:62-69 '57. (MIRA 11:1)

1. Iz kafedry patologicheskoy fiziologii (zav. M.A.Yerzin, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A.D.Ado) Kazanskogo gosudarstvennogo meditsinskogo instituta.

(ANTIGENS, effects,

spinal reflex activity after antigenic stimulation of various parts of CNS in frogs (Rus))

(CENTRAL NERVOUS SYSTEM, effect of drugs on,

antigenic stimulation of various parts in frog, eff. on spinal reflex activity (Rus))

(SPINAL CORD, physiology,

reflex activity after antigenic stimulation of various parts of CNS (Rus))

RAKHMATULLIN, I.M.

Some data on the pathogenesis of allergic neuritis. Biul. eksp. biol.
i med. 48 no.10:34-36 O '59. (MIRA 13:2)

1. Iz kafedry patologicheskoy fiziologii (zav. - doktor med. nauk
M.A. Yerzin) Kazanskogo meditsinskogo instituta. Predstavlena doyst-
vitel'nyy chlenom AMN SSSR B.N. Chernigovskim.
(ALLERGY exper.)
(NEURITIS exper.)

RAKHMATULLIN, I.M.

Comparative pathology of anaphylaxis (anaphylaxis in frogs).
Ark. pat. 21 no.12:3-7 '59. (MIPA 13:12)
(ANAPHYLAXIS)

RAKHMATULLIN, I.M.

Characteristics of the action of diplacin in anaphylactic and histamine shock. Vest.AMN SSSR 17 no.8:50-53 '62. (MIRA 15:12)

1. Kafedra patologicheskoy fiziologii Kazanskogo meditsinskogo instituta.

(DIPLACIN)

(ANAPHYLAXIS)

(HISTAMINE---TOXICOLOGY)

RAKHMATULLIN, I.M.; TOLPESINA, T.B.

Mechanism of allergic manifestations following use of medicinal substances. *Kaz.med.shur.* 40 no.5:89-94 S-O '59. (NIRA 13:7)

1. Iz kafedry patologicheskoy fiziologii (zav. - doktor med. nauk M.A. Yersin) Kazanskogo meditsinskogo instituta.
(ALLERGY)

RAKHMATULIN, K. A.
Rakhamatulin, K. A. Propagation of unloading waves along
a bar with variable elastic limits (accumulation of residual
deformation). Appl. Math. Mech. [Akad. Nauk SSSR.
Prikl. Mat. Mekh.] 10, 333-346 (1946). (Russian. Eng-
lish summary)

The paper is concerned with the following problem: the
end of a semi-infinite cylindrical bar of an elastic-plastic
material is subjected to repeated longitudinal blows; to
study the accumulation of permanent deformation along
the bar. W. Prager (Providence, R. I.).

Source: Mathematical Reviews,

Vol. 9, No. 4

RAKHMATULIN, K. A.

Rakhmatulin, K. A. Impact on a flexible cord. Appl.
Math. Mech. [Akad. Nauk SSSR. Prikl. Mat. Mech.] 11,
379-382 (1947). (Russian. English summary)
Continuation of a paper in the same journal 9, 449-462
(1945); these Rev. 7, 351.

Source: Mathematical Reviews, 1948, Vol 9, No. 2

RAKHMATULIN, Kh. A.

Rahmatulin, H. A. On the propagation of cylindrical waves
in plastic deformations (torsional impact). Akad. Nauk
SSSR. Prikl. Mat. Meh. 12, 39-46 (1948). (Russian)

This paper is concerned with the following problem: a
rigid, infinitely long cylinder is embedded in an infinite,
plastic body with linear strain-hardening; given the time
dependence of the exterior torque applied to this cylinder,
to study the propagation of the shear waves produced in the
plastic body. W. Prager (Providence, R. I.).

Source: Mathematical Reviews,

Vol 9 No. 10

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101. E. A. Babenok and G. S. Shapiro, "On the propagation of plane electromagnetic waves in a plasma with a periodic structure," *Radio Engng. Electron. Phys.*, 1968, vol. 13, no. 10, pp. 200-204.

The paper considers the longitudinal strain-wave propagation in a semi-infinite cylindrical rod subjected to a periodic load on the end. The problem is considered to be of sufficient importance to merit a separate study. A linear stress-strain law and a linear relationship between strain and stress are assumed. Two particular problems are considered: (1) growth of stress and displacement of the end, with the maximum value held for a finite time; (2) resonance stress and fall of load.

The equation of motion and the stress-strain relationship for a cylindrical rod with a periodic pair of linear periodic differential equations with velocity and strain as the dependent variables. The pair of equations changes when unloading starts. Methods of a previous paper in the same journal (1968, vol. 10, pp. 567-568) are applied. The first problem is solved by using the method of characteristics in the phase and elastic regions. A numerical procedure is employed.

The second problem involves only wave fronts of stress discontinuity, and the conditions across such wave fronts are obtained from conservation laws which determine the development of the wave system. The authors assume that the particle velocity is small compared with the wave velocity, but this restriction might not be necessary if Lagrange coordinates were adopted. The statement of the phenomenon occurring is given without proof.

The solution of this type of problem for an arbitrary stress-strain relationship has been given by Babenok and Shapiro, *Radio Engng. Electron. Phys.*, 1968, vol. 13, no. 10, pp. 200-204. See also White and Griffin, *J. Appl. Mech.*, Dec. 1967, vol. 34, pp. 317-318 for comparison level on plasticity rather than quantitative measurements.

E. H. Lee, USA

RAKHMATULLIN KH. A.

to repeated blows along absolutely rigid plate.
Submitted 26 Nov 49.

USSR/Physics - Elasticity
Wave Propagation

Jan/Feb 50

Discusses the cases: (1) medium with increasing elastic limit, i.e., when load is applied to rod that has first been subjected to blow from opposite end, (2) medium with decreasing elastic limit, i.e., repeated blows on same end of rod, and (3) accumulation of residual deformation in rod when subjected

157T84

"Prilad Matemat 1 Mekh" Vol XIV, No 1

"Study of the Laws of Plane Elastic-Plastic Wave Propagation in a Medium With a Variable Elastic Limit," Kh. A. Rakhmatullin, Inst of Mech, Acad Sci USSR, 9 pp

USSR/Physics - Elasticity
Wave Propagation

Jan/Feb 50

157T84

RAKHMATULIN, Kh. A.

"Transverse Blow with Variable Velocity on an Elastic String," *Izv. V. Vyssh. Shkoly, Chair of Elasticity Theory*

Vest Mos Univ, Ser Fizikomati i Vest Nauk, No. 7, pp 85-91 (1951)

States that Kh. A. Rakhmatulin ("Propagation of the Load-Removal wave," *Zhur Prikl. Mat. i Mekh* Vol. 9, No 1, 1945; "Slanting Blow on a flexible String with large Velocities in the case of Friction," *ibid.* Vol 9, No 6, 1945) was the first to propose and solve the problem of the blow on an elastic string by a material point of infinitely large mass or, what is the same, the blow of a material point on a string with const velocity. Here the authoress discusses the case of finite mass (i.e. variable velocity). Refers to related work of Kh. A. Rakhmatulin in *Uchenyye Zapiski MSU (Sci Notes of Moscow State U)*, Vol. 4, No. 153, 1951

AKHMATULIN, Kh. A.

"Determination of the Dynamic Dependence Between Stress and Strain", A.S. Vadeyeva,
Chair of Elasticity Theory

Vest Mos Univ, Ser Fizmat i Vest Nauk, No 7, pp 93-98-1951

Expounds the principle governing the construction of the dynamic dependence between tensile (compressional) stress and elongational strain for the case of soft steel from the residual deformations that occur as a result of the collision of an elastic beam and elastic-plastic beam. Refers to related works of Kh. A. Akhmatulin ("Method of Constructing the Dynamic Dependence Between Stresses and Strains from the Distribution of Residual Deformations", Vest Moskov Univ, No 5, 1951).

RAKHMATULIN, KH. A.

3
1 - P/W
Rahmatulin, H. A. On the propagation of plane waves in an elastic medium with nonlinear dependence of the stress on the strain. Moskov. Gos. Univ. Uč. Zap. 152, Meh. 3, 47-55 (1951). (Russian)

In linear elasticity, velocity waves and all weaker types of discontinuity surfaces must be characteristics of the equations of motion. In nonlinear elasticity, weaker types of discontinuities continue to be characteristics, but there is reason to expect velocity waves not to be. One thing which suggests this is the known distinction between shock waves and Mach waves in ideal gases.

The author investigates velocity waves and characteristic surfaces in nonlinear elasticity, assuming a one-dimensional situation where tension is an essentially arbitrary function of extension. He points out that, in general, in a material region containing the wave, it is impossible for the rate of change of total energy to be balanced by the rate at which the stresses do work. Here total energy means strain energy plus kinetic energy. This suggests that these waves involve processes which are neither adiabatic nor isothermal. He determines the characteristics and discusses some of their properties.

J. L. Ericksen (Washington, D. C.)

KAKHATULLIN, S. H.

(2)

Mathematical Reviews
Vol. 14 No. 8
Sept. 1953
Mechanics.

Kakhmatullin, H. A. Normal impact on a flexible cord with variable velocity. Moskov. Gos. Univ. Uchenye Zapiski 154, Mekhanika 4, 267-274 (1951). (Russian)

A mass point moves with variable velocity perpendicular to a stretched cord of infinite length. The shape of the cord is calculated by a linearised theory. This linearisation causes the velocity of the mass point to be a linear function of the time, and the shape of the cord becomes a quadratic function of the coordinate along the cord. W. H. Muller.

EH
9-10-53

RAKHMATULIN, Khatii Arzestovich; SAGMONIAN, Aron Yakovlevich;
ALEKSEYEV, Nikolay Aleksandrovich; DOZORTSEVA, G.I., ed.

[Problems in soil dynamics] Voprosy dinamiki gruntov.
Moskva, Izd-vo Mosk. univ., 1964. 236 p.

(NIMA 12:1)

USSR/Mathematics - Impact on Elastic Thread Jan/Feb 52

"Transverse Impact on an Elastic Thread by a Body of Given Shape," Kh. A. Rakhmatulin, Moscow

"Pril Matemat i Mekh" Vol XVI, No 1, pp 23-34

In his dissertation I. M. Zverev analyzed the impact of a wedge on elastic threads with attention to points of transition from lateral to longitudinal stress, interpreted as impact on thread, elastic along its length and inelastic transversely. Author generalizes problem to impact by

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USSR/Mathematics - Impact on Elastic Thread (Contd) Jan/Feb 52

body of arbitrary shape. Shows that in passage of wave of strong tear, the energy vanishes. Submitted 15 Oct 51.

203754

RAKHMATULIN, Kh. A.

RAKHMATULIN, Kh. A.
USSR, Mathematics - Sound waves reflection

FD-951

Card 1/1 Pub 89-5/11

Author : Rakhmatulin, Kh. A.

Title : Solution of problem of reflection of sound waves from a rigid plane having a deformable part

Periodical : Prikl. mat. i mekh. 18, 573-584, Sep/Oct 1954

Abstract : Solves the above problem of hydrodynamics by reducing it to the solution of an inhomogeneous linear differential equation with constant coefficients. The problem may be generalized to an incident wave of variable intensity.

Institution : Institute of Mechanics, Acad Sci USSR

Submitted : APRIL 20, 1954

RAKHMATULIN, KH-A

✓ *Handwritten* Rahmatulin, H. A., and Sapiro, G. S. Propagation of disturbances in a nonlinearly elastic and a nonelastic medium. Izv. Akad. Nauk SSSR. Otd. Tehn. Nauk 1955, no. 2, 68-89 (1 plate). (Russian)

This paper is mainly an account of the literature published on the subject of non-linear wave propagation in solids. Thus, attention is given to the following types of mechanical behaviour: non-linear elastic, elastic-plastic, visco-elastic, visco-plastic and visco-elastic-plastic. A very full bibliography with 77 references is appended to the paper. *H. G. Hopkins* (Sevenoaks).

1-F/W

3

Handwritten
MT

RAKHMATULIN, Kh. A.

Rahmatulin, H. A. Foundations of the gas dynamics of interpenetrating motions of compressible media. Prikl. Mat. Meh. 20 (1956), 184-195.

The author derives general partial differential equations for the interpenetrating motion of compressible ideal fluids. These equations are, however, mere generalizations of the classical ones. The analysis is based on the continuity equation, which is called the law of Lomonosov. In particular, the author considers rather thoroughly the case of the interpenetrating action of two compressible media. The characteristics pertaining to the appropriate hyperbolic equation are obtained explicitly. Linearizations are also effected. Finally, the author discusses three particular cases, namely, 1) the motion of incompressible fluids, 2) the uniform motion through tubes of variable cross-sections, and 3) the non-uniform flow of incompressible fluids. Numerical results are not given.

K. Bhagwandin (Oslo).

RAKHMATULLIN, Kh.A., akademik

Theory of the pneumatic cotton-picking machinery. Izv. AN Uz.

SSR. Ser. tekhn. nauk no. 1:41-52 '57.

(MIRA 11:7)

(Cotton-picking machinery)

RAKHMATULIN, Kh. A.; and STEPANOVA, L. I.,

"Propagation of the Explosive Shock Wave in Soils", Theoretical Problems in
Crushing Rock by Blasting, Moscow, Izd-vo AN SSSR, 1958. 161 p.

RAKHMATULIN, Kh.A. (Moskva)

Propagation of elastic and plastic waves subjected to complex
loading. Prikl.mat. i mekh. 22 no.6:759-765 N-D '58.
(MIRA 11:12)

(Elastic waves)

RAKHMATULLIN, Kh.A., akademik

Mechanizing cotton harvesting and the removal of cotton leaves.
Izv. AN Uz. SSR. Ser. tekhn. nauk no. 3:8-12 '59. (MIRA 12:7)

1. AN Uz SSR. Institut mekhaniki AN Uz SSR.
(Cotton-picking machinery)

RAKHMATULIN, Kh.A. (Moskva)

Propagation of elastic and plastic waves in a semispace.
Prikl. mat. i mekh. 23 no.3:419-424 My-Je '59.

(MIRA 12:5)

(Elastic waves)

Report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics,
Moscow, 27 Jan. - 3 Feb. '60.

234. G. I. Piontsov (Moscow): Large deflections of reinforced
concrete cylindrical shells.
235. V. P. Babitskiy (Moscow): The δ -function (nonlinear)
creep of shells of cylindrical shells.
236. A. A. Krasovskiy (Moscow): Creep and consolidation of soils
under the action of impact forces.
237. Yu. S. Lavrent'ev (Leningrad): Creep.
238. A. A. Lavrent'ev (Leningrad): Some problems in the theory of
elasticity concerning the design of rock foundations.
239. A. A. Lavrent'ev (Leningrad): Some difference equations of
structural mechanics.
240. A. A. Lavrent'ev (Leningrad): On the propagation of elastic
waves in a half-space.
241. G. A. Babitskiy (Moscow): Propagation of disturbances in
viscoelastic media.
242. V. P. Babitskiy (Moscow): Earth pressure on flexible retaining
walls.
243. V. I. Buzdov (Leningrad): On the pressure of a punch on an
elastic half-space.
244. A. A. Babitskiy (Moscow): Types of high molecular and di-
atomic structures and their non-stochastic mechanical proper-
ties.
245. A. A. Babitskiy (Moscow): On the influence of the medium principal
stress on the fatigue strength.
246. V. I. Babitskiy (Moscow): The application of the method of homo-
geneous deformations to some two-dimensional problems of the
theory of elasticity.
247. A. A. Babitskiy (Moscow): Some three-dimensional problems of
limit equilibrium in rigid plastic soils.
248. A. I. Babitskiy (Moscow): On the application of the
variational method to problems of creep theory of
materials.
249. A. I. Babitskiy (Moscow): Some problems of the
integral operator theory of creep.
250. A. I. Babitskiy (Moscow): Creep of viscoelastic bodies
under bending and torsion.
251. A. I. Babitskiy (Moscow): The asymptotic study of the
deformation of rock foundations.
252. G. A. Babitskiy (Moscow): The determination of the
elasticity modulus of a layered plate by the method of
nonlinear approximations.
253. V. I. Babitskiy (Moscow): Torsion of anisotropic prismatic
bars of elongated cross section.
254. V. I. Babitskiy (Moscow): The impact of a double punch
on a half plane.
255. V. I. Babitskiy (Moscow): The use of similarity considerations
for improving the convergence in the theory of shells by
nonlinear approximations.
256. A. I. Babitskiy (Moscow): Stability of cellular structures
built on soft ground.
257. A. I. Babitskiy (Moscow): Bending of thin high-strength
plates supported by an elastic layer of finite thickness.
258. A. I. Babitskiy (Moscow): Plastic bending of plates into
cylindrical shells.
259. A. I. Babitskiy (Moscow): A beam on a two-layer half space
beyond the elastic limit.
260. V. I. Babitskiy (Moscow): Some problems of creep and
consolidation of saturated soils.
261. A. A. Babitskiy (Moscow): Determination of the natural
frequencies of plates of constant and variable thickness.
262. A. A. Babitskiy (Moscow): Dynamic problems of the design of
retaining walls and soil foundations under impact loads.
263. A. A. Babitskiy (Moscow): Solution of some dynamic problems
of string structures by the method of initial parameters.
264. V. I. Babitskiy (Moscow): On some problems of the theory
of plasticity and soil mechanics.
265. A. A. Babitskiy (Moscow): On a class of solutions
to boundary value problems in plasticity.
266. A. A. Babitskiy (Moscow): The effect of internal friction
on the stresses in beams and plates under impulsive loading.
267. V. I. Babitskiy (Moscow): Stresses in cylindrical
shells subjected to internal pressure.

PHASE I BOOK EXPLOITATION

SOV/4000

SOV/12-M-27

Akademiya nauk SSSR. Institut mekhaniki

Inzhenernyy sbornik, t. 27 (Engineering Collection, Vol. 27) Moscow, Izd-vo AN SSSR, 1960. 210 p. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk.

Resp. Ed.: A. A. Il'yushin; Ed.: V. M. Akhundov; Ed. of Publishing House: V.M. Akhundov; Tech. Ed.: A.P. Guseva.

PURPOSE: This book is intended for engineers, applied physicists, and applied mathematicians.

COVERAGE: The book consists of 24 articles on such problems as wing theory, supersonic flow, theory of shells, stability, plasticity and elasticity, the bending of thin plates and shells, and various aspects of applied mathematics. No personalities are mentioned. References accompany most of the articles.

Card 1/6

RAKHMATULIN, Kh. A. - USSR Academy of Sciences, Leningrad Road 7. Moscow D-40 - USSR.

"On Some Methods of Solution of Dynamic Problems of Elasticity and Plasticity."

report submitted for the 10th Intl. Congress of Applied Mechanics, Stresa, Italy,
31 Aug-7 Sep 1960.

PHASE I BOOK EXPLOITATION

SOV/5825

Rakhmatulin, Khalil Akhmedovich, and Yuriy Andreyevich Dem'yanov

Prochnost' pri intensivnykh kratkovremennyykh nagruzkakh (Strength Under Heavy Impact Loads) Moscow, Fizmatgiz, 1961. 399 p. Errata slip inserted. 6000 copies printed.

Ed.: I. K. Snitko; Tech. Ed.: N. Ya. Murashova.

PURPOSE: This book is intended for scientific research workers in the fields of the elasticity and plasticity of materials, and especially for persons concerned with dynamic problems in these fields.

COVERAGE: Problems of dynamic short-time loading and of the dynamic strength of materials are discussed. The theory of plane-wave propagation in bars made of inelastic and elastoplastic materials, and the application of this theory in the determination of dynamic stress-strain diagrams for the compression of metals, are stated. The theory of longitudinal and transverse

Card 1/7

Strength Under Heavy Impact Loads

SOV/5825

waves in elastic and elastoplastic flexible constraints, and its application to the solution of certain engineering problems (the motion of braking devices, the construction of dynamic stress-strain diagrams for tension, calculation of the deformation of warp threads in looms, etc.) are reviewed. Problems of the dynamic deformation of axially and spherically symmetrical objects, including diaphragms and plates made of elastic, elastoplastic, and rigid-plastic materials, are presented. Disturbance-propagation problems in other rheological media (elastoviscous, viscoplastic, elastic-viscoplastic, perfectly plastic gas, etc.) are also reviewed. Experimental data are given which confirm the applicability of certain deformation laws for describing the behavior of some materials. No personalities are mentioned. There are 126 references: 81 Soviet, 35 English, 5 German, 4 French, and 1 Italian.

Cari 2/7

33597
5/207/61/000/004/008/012
E032/E514

10.1210

AUTHORS: Rakhmatulin, Kh.A. and Savinov, K.G. (Moscow)
TITLE: On a method of solution of the problem of supersonic
flow past an annular wing
PERIODICAL: Akademii nauk SSSR. Siberskoye otdeleniye.
Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki.
no.4, 1961, 137-141
TEXT: The solution of the problem for a small angle of
attack is resolved into two independent problems, namely, the axial
flow past an annular wing and the flow past an infinitely thin
hollow cylinder at a small angle of attack. The solution of the
original problem is obtained by superimposing these two solutions.
The axially symmetric problem is solved by an operational method
and the "method of characteristics". The cylinder problem is
solved by the method of characteristics. Formulae are derived
for the resistance coefficient, the lift force and the aerodynamic
moment. They are then applied to an annular wing of limited
finite length which is coaxial with a solid cylinder of infinite
length or a truncated slightly conical cylinder. The resistance
Card (1/2)

ALEKSEYEV, N.A. (Moskva); RAKHMATULIN, Kh.A. (Moskva); SAGOMONYAN, A.Ya.
(Moskva)

Fundamental equations of soil dynamics. PMTF no.2:147-150 Mr-Ap
'63. (MIRA 16:6)

(Soil mechanics)

L 18065-63

EWP(r)/BDS . EM

ACCESSION NR: AP3002707

S/0167/63/000/003/0038/0048

53
52

AUTHOR: Rakhmatulin, Kh. A.

TITLE: An approximate method for solving a dynamic problem of elasticity and plasticity ¹⁶

SOURCE: AN UzSSR. Izv. Seriya tekhnicheskikh nauk, no. 3, 1963, 38-48

TOPIC TAGS: wave propagation, approximate method, elasticity

ABSTRACT: This paper was read at the Congress on Theoretical and Applied Mechanics held in Italy (Streza) in 1959. The author proposes a method which is more suited for solving problems of propagation and reflections than the present methods (which are suitable for elastic oscillations) ¹⁶. The basic method relies on the following: In the region close to the axis of symmetry, the motion is close to planar. Hence it follows that, with passage across the front of transverse waves, the deformations and stresses are continuous. Note that, for elastic deformations, the distribution of the stresses on the fronts of lengthwise and transverse waves can be determined beforehand. If by some means the distribution of the accelerations is approximately given, then, as a result of the known boundary conditions,

Card 1/2

L 18065-63

ACCESSION NR: A3002707

the dynamic problem is reduced to a static problem. Orig. art. has: 24 formulas and 4 figures.

ASSOCIATION: Institut mekhaniki AN UzSSR (Institute of Mechanics, Academy of Sciences, Uzbek SSR)

SUBMITTED: 20Jan63

DATE ACQ: 12Jul63

ENCL: 00

SUB CODE: MM

NO REF SOV: 006

OTHER: 000

Card 2/2

L 18053-63

EPR/EWP(r)/EWP(j)/BPF(c)/EWT(1)/EPF(n)-2/EWT(m)/BDS/ES(v)/
ES(w)-2 AFFTC/ASD/SSD Pab-l/Pe-l/Pr-l/Pc-l/Pr-l/Pu-l RM/KW/MAY

ACCESSION NR: AP3002807

S/0207/63/000/003/0067/3070

AUTHORS: Vasil'ev, G. I.; Dem'yanov, Yu. A.; Kurnakov, V. I.; Malakhov, A. V.;
Rakhmatulin, Kh. A.; Rumynskiy, A. N. (Moscow)

TITLE: Experimental determination of the coefficient of heat conductivity of
heat-insulated materials by the method of automodel behavior

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1963, 67-70

TOPIC TAGS: heat conduction, coefficient of heat, automodel

ABSTRACT: The authors propose an experimental method for determining the coefficient of heat conductivity of a material which makes use of the fact that, with the transformation $\xi = x/\sqrt{t}$, x being position and t being time, if the material is essentially one-dimensional as in an infinite rod (i.e., the transverse dimensions and height of the initially heated specimen must be much greater than the thickness at the time of the experiment) then T as a function of ξ satisfies

$$c_p \gamma \frac{dT}{d\xi} = - \frac{2}{\xi} \frac{d}{d\xi} \left(\lambda \frac{dT}{d\xi} \right) \quad (1.1)$$

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ACCESSION NR: AF3002807

where λ is the coefficient of heat conductivity to be determined and c_p and γ are the thermal capacity and specific weight which are considered known functions of T . Thus it is sufficient to determine the character of the temperature change at one point of the specimen in order to know the entire temperature field $T = T(\xi)$. Integrating (1.1) from ξ to ∞ and letting $\partial T / \partial \xi \rightarrow 0$ as $\xi \rightarrow \infty$,

$$\lambda(\xi) = \frac{1}{2(dT/d\xi)} \int_{\xi}^{\infty} c_p \gamma \frac{dT}{d\xi} \xi d\xi \quad (1.2)$$

Orig. art. has: 4 formulas and 6 figures.

ASSOCIATION: none

SUBMITTED: 12Jun62

DATE ACQ: 16Jul63

ENCL: 00

SUB CODE: PH

NO REF SOV: 007

OTHER: 001

Card 2/2

ANISIMOV, V.A. (Moskva); RAKHMATULIN, Kh.A. (Moskva)

Propagation of compressive-shearing perturbations in a nonlinear-
ly elastic medium. Prikl. mat. i mekh. 28 no.3:572-573 My-Je-64
(MIRA 17:7)

[See Synonymy of *Calceolaria* in *Mon. & Synonymy* series,
1963, 7:204-25.] (MIRA 18:10)

ACC NR: AP6023010

SOURCE CODE: UR/0167/66/000/002/0006/0011

AUTHOR: Rakhmatulin, Kh. A.

ORG: Institute of Mechanics, AN UzSSR (Institut mekhaniki AN UzSSR); Computer Center,
AN UzSSR (Vychislitel'nyy tsentr AN UzSSR)

TITLE: On the theory of the finite-span airfoil in cases of supersonic speeds

SOURCE: AN UzSSR. Izv. Ser tekhn n, no. 2, 1966, 6-11

TOPIC TAGS: aerodynamic boundary layer, aerodynamic theory, supersonic flow, aerodynamic configuration , *AIRFOIL CHARACTERISTIC*

ABSTRACT: The article deals with the shape of the head wave for the case of a linearized supersonic flow around an airfoil. It is shown that for airfoils with a "convex" leading edge the head wave is a surface enveloping Mach cones with apices at the leading edge whereas for airfoils with a "concave" leading edge the head wave is discontinuous and the ordinary solution of the velocity potential applies only in the region adjacent to the leading edge. This is a circumstance which no previous investigators have noticed. This is demonstrated for the case of a thin airfoil with low angles of attack in a supersonic flow (Fig. 1) for Mach cones with a flare angle of 2α , originating from two points A and O (Fig. 1) on the airfoil's contour. In the $y = z$

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ACC NR: AP6023010

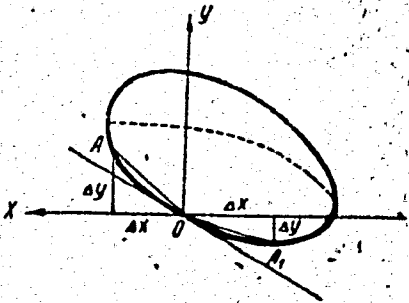


Fig. 1

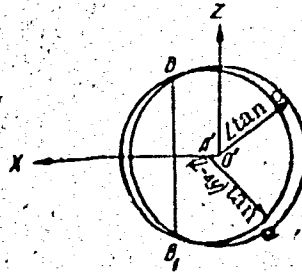


Fig. 2

plane these Mach cones intersect at two points, B and B_1 (Fig. 2). Note that A' is the projection of point A and O' , the projection of point O (Fig. 2). It is shown that the point with the abscissa x_0 is indeed the point at the boundary of the region perturbed by the airfoil (the envelope of Mach cones). The conditions of interference at the head wave coincide with the satisfaction of the condition that the velocity potential at the head wave should equal zero. These conclusions, as well as the mathematical relations on which they are based, permit a redefi-

Card 2/3

ACC NR: AP6023010

inition of the concept of head wave: the head wave is a surface described by the apex of a Mach cone whose line of intersection with the plane of the airfoil is tangential to the leading edge. Orig. art. has: 2 figures, 15 formulas.

SUB CODE: 01, 20, 12/ SUBM DATE: 28Nov65/ ORIG REF: 002/ OTH REF: 001

Card

3/3

ACC NR: AM6012203

Monograph

UR/

Rakhmatulin, Khalil Akhmedovich; Sagomonyan, Artur Yakovlevich; Bunimovich, Abram Isaakovich; Zverev, Igor' Nikolayevich

Gas dynamics (Gazovaya dinamika) Moscow, Izd-vo "Vysshaya shkola", 1965, 722 p. illus., biblio., tables. 7500 copies printed.

TOPIC TAGS: gas dynamics, gas flow, supersonic flow, aerodynamic heating, boundary layer

PURPOSE AND COVERAGE: This textbook for university students is based on lectures in gas dynamics given by the authors at the Mechanical and Mathematical Department, Moscow State University. The book presents fundamentals of gas dynamics with special emphasis placed on modern numerical methods of solving gas dynamic problems using electronic computers.

TABLE OF CONTENTS:

1. Thermodynamics -- 9
2. Gas motion equations -- 98
3. One-dimensional steady-state motion of gas -- 179
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5. One-dimensional nonsteady-state motion of gas with finite perturbations -- 266
6. Steady supersonic gas flow with finite perturbations -- 299

Card 1/2

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ACC NR: AM6012203

7. Steady-state supersonic gas flow about bodies of revolution -- 351
8. Shock waves (self-modeling problems) -- 437
9. Two-dimensional subsonic motion of gas with finite perturbations -- 470
10. The boundary layer and problems of aerodynamic heating -- 490
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12. Physical principles of the theory of radiating gas -- 642

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SUB CODE: 20/ SUBM DATE: 24May65/ ORIG REF: 092/ OTH REF: 039

Card 2/2

Rec. 10/10/1956
BELYAYEV, A.M.; IOFFE, E.I.; PERVOZVANSKIY, A.I.; NAVASARDYAN, Ye.N.;
BLIOKH, S.S.; REVAZASHVILI, B.I.; PROTOPOPOV, M.M.; RAKHMATULLIN,
K.Kh.; SEMENOV, V.I.; KRIVOSHEIN, S.S.; SHVETSOV, A.P.; MAKAROV, M.P.;
OTROZHDENNOV, A.I.; ZHUKOV, D.D.; BELYAYEV, A.M.

Speeches. Trudy Mekhanobr. no.93:122-173 '56. (MIRA 11:6)
(Ore dressing--Equipment and supplies) (Waste products)

RAKHMELEVICH, Lev Saltykovich

(solitsilaty) and ?imposing? ?coagulation? (sventyway-most') of Blood

Dissertation for candidate of a Medical Science degree. Chair of Normal Physiology (head, Prof. Ye. S. Ivanitskiy-Vasilenko), Saratov Medical Institute, 1951.

MURZHIN, I.I., inzhener, sostavitel'; RAKHMATULIN, M.D., inzhener, redaktor;
BOBROVA, Ye.M., tekhnicheskiy redaktor

[Progressive technology in diesel locomotive repair; the practice of
diesel locomotive shops] Peredovaya tekhnologiya remonta teplovozov;
opyt teplovoznnykh depo. Moskva, Gos.transp.zhel-dor. izd-vo, 1956.
78 p. (MIRA 10:1)

(Diesel locomotives--Repairs)

RAKHMATULIN, Mansur Dabalgali; GAIANOVA, M.S., inzhener, redaktor; VKRINA, G.P., tekhnicheskii redaktor

[Repair of locomotives; diesels and supplementary equipment] Remont teplovozov; dizel' i vspomogatel'nye oborudovaniya. Moskva, Gos. transp. zhel-dor. izd-vo, 1956. 439 p. (MIRA 10:3)
(Diesel locomotives--Repairs)

RAKHMATULIN, M.D., inzhener.

Some problems in the technical maintenance and repair of diesel
lokomotives. Zhel.dor.transp. 38 no.10:21-25 0 '56. (MLRA 9:11)
(Diesel lokomotives--Repairs)

BELEN'KIY, Aleksandr Davydovich; BOGDANOV, Ivan Danilovich; YEROSHIN,
Mikhail Mikhaylovich; MARTYHENKO, Roman Dmitriyevich; RAKHMATULIN,
M.D., inzhener, redaktor; VERINA, G.P., tekhnicheskij redaktor

[Eliminating defects in locomotives] Ustraneniye nelspravnostei
teplovoza. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 102 p.
(MIRA 10:9)

(Locomotives--maintenance and repair)

RAKHMATULIN, M.D., inzhener.

Some conclusions drawn from the work experience of Engineer
A.G. Antiunkin. Elek. i tepl. tiaga no.2:30 P '57. (MLRA 10:5)
(Diesel locomotives)
(Antiunkin, A.G.)

RAZDARULIN, I. N., Engineer

Can the between-repairs runs of diesel locomotives be increased?

Model: Leningrad no. 7: 18-20 J1 57

(MIRA 10-4)

(Diesel locomotives--Maintenance and repair)

RAKHMATULIN, Mansur Dzhaliali, kand. tekhn. nauk; KISELEVA, N.P.,
red.

[Maintenance and repair of diesel locomotives] Remont teplo-
vozov. Izd.2., perer. i dop. Moskva, Transport, 1965.
495 p. (MIRA 18:7)

RAKHMATULIN, M.D., kand.tekhn.nauk, MEDVEDSV, V.G., inzh.

Improving the technology for the assembly of the piston and
connecting rod block of the 2D100 diesel locomotive. Elek. i
tepl.tiaga no.8:10-12 Ag '63. (MIRA 16:9)
(Diesel locomotives--Maintenance and repair)

RAKHMATULIN, M.D., kand. tekhn. nauk

Changeable bushings simplify the repair of diesel locomotive parts. Elek. i tepl. tiaga no.5:21-23 My '63. (MIRA 16:8)

(Diesel locomotives—Maintenance and repair)

AVRUNIN, A.G., inzh.; RAKHMATULIN, M.D., kand. tekhn. nauk, retsenzent;
KISELEVA, N.P., inzh., red.; MAKUNI, Ye.V., tekhn. red.

[Diesel engine 2D100 for diesel locomotives; its maintenance
and repair] Teplovoznii dizel' 2D100; tekhnicheskoe obsluzhi-
vanie. Izd.2. ispr. i dop. Moskva, Transzheldorizdat, 1963.
313 p. (MIRA 16:4)

(Diesel engines--Maintenance and repair)

RAKHMATULIN, M.D., inzh.

Methods for determining the service time of diesel locomotives
between repairs. Trudy MIIT no.130:147-169 '60. (MIRA 14:3)
(Diesel locomotives—Maintenance and repair)

RODOVSKIY, A.B., inzh. [translator]; LUGININ, N.G., kand. tekhn. nauk, retsenzent; RAKHMATULIN, M.D., inzh., red.; KHITROV, P.A., tekhn. red.

[Maintenance and repair of the electric equipment of diesel locomotives; collection of translated articles] Remont elektricheskogo otorudovaniia teplovozov; sbornik perevodnykh statei. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 107 p. (MIRA 14:10)

(United States--Diesel locomotives--Electric equipment)

RAKHIMATULIN, M. D. Cand Tech Sci -- "On the problem of establishing ^{period of} periodicity and repair time for internal combustion locomotives." Mos, 1961 [REDACTED]

[REDACTED] (Min of Railways USSR. Mos
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REMPEL', Aron Iosifovich, inzh.; PEREL'MAN, Yuriy Zalemanovich, inzh.; MI-KHAYLOVSKIY, Aleksandr Moiseyevich, inzh.; RAKHMATULIN, M.D., retsen-zent; VUL'F, V.V., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Repairing the cylinder-piston system of the 2D100 diesel engine; practices of the Tashkent Diesel Locomotive Depot] Remont tsilindro-brshnevoi gruppy dizelia 2D100; iz opyta Tashkentskogo teplovoznogo depo. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei so-obshcheniia, 1961. 38 p.

(MIRA 14:7)

(Diesel engines--Maintenance and repair)

PISTSOV, Dmitriy Vasil'yevich; SIVAK, Vladimir Yefimovich; BELEN'KIY,
Aleksandr Davydovich; RAKHMATULIN, H.D., inzhener, redaktor;
KHITROV, P.A., ~~tekhnicheskii redaktor.~~

[Fuel economy on locomotives] Ekonomiya topliva na teplovozhakh.
Moskva, Gos.transp.zhel-dor izd-vo, 1955. 71 p. (MLRA 8:11)
(Locomotives--Fuel consumption)

AVRUNIN, Abram Grigor'yevich, inzh.; RAKHMATULIN, M.D., inzh, red.;
BOBROVA, Ye.N., tekhn.red.

[2D100 diesel for diesel-electric locomotives; maintenance]
Teplovoznnyy dizel' 2D100; tekhnicheskoe obsluzhivanie. Moskva,
Gos.transp.zhel-dor.izd-vo, 1958. 334 p. (MIRA 11:12)
(Diesel engines) (Diesel locomotives)

Remont Neplovezov, Dizel' i Vapomogatel' Noye Ghorudovaniye (Locomotive
Repair; Diesel and Auxiliary Equipment)
Moskva, Transzheldorizdat, 1946.
139 P. Illus., Diagrams, Graphs, Tables.
"Literatura": P. 126.

FUFRIYANSKIY, N.A., prof., red.; RAKHMATULIN, M.D., inzh., red.; BOBROVA,
Ye.N., tekhn.red.

[Construction and operation of gas generator locomotives] Opyt
sozdaniya i ekspluatatsii gazogeneratornykh teplovozov. Moskva,
Vses. izd-vo poligr. ob"edinenie m-va putei soob., 1960. 129 p.
(Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.191). (MIRA 13:10)

1. Rukovoditel' otdeleniya teplovozov i lokomotivnogo khozyaystva
Vsesoyunzogo nauchno-'ssledovatel'skogo instituta zheleznodorozh-
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(Locomotives)

VASIL'KOV, G.V.; SPIROV, G.A.; DZHANOV, A.; SENNIKOV, M.I.;
SELYUCHENKO, A.; DEKANOV, I.; RAKHMATULLIN, M.G.; EYSMONT, V.V.;
KOSOVER, S.I.; TSUVERKALOV, D.A.; LESHKOV, B.G.

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of reforming a channel. Rech. transp. 22 no.11:44-46 N '63.
(MIRA 16:12)

RAKHMATULIN, N.

We design and use new installations. Rech. transp. 20 no. 1:39-
40 Ja '61. (MIRA 14:2)

1. Nachal'nik Technicheskogo otdela Obskogo basseynovogo
upravleniya puti.

(Sounding and soundings)

BELOGLAZOV, I. Z.; BAKHETILIN, B. I.

Attachment for milling slits in screw heads. Pat. predl. na gor.
elektrotransp. no. 9:49-50 '64. (MIRA 18:2)

1. Sluzhba povvizhnogo sostava Tramvayno-trolleybusnogo upravleniya
Sverdlovsk.

L 53606-65 ENT(m)/EPF(n)-2/EWA(h) Pu-4

ACCESSION NR: AP5009388

S/0208/65/005/002/0218/0235
517.9:533.9

AUTHOR: Rakhmatulina, A. Kh. (Moscow)

TITLE: On the asymptotic form of neutron transport equations

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 2, 1965, 218-235

TOPIC TAGS: neutron transport, asymptotic stability, Cauchy problem, neutron flux

ABSTRACT: The neutron transport equation when the neutrons have constant energy values and energy exchange with the nuclei does not occur has the following form for the case of isotropic scattering in a homogeneous medium:

$$\frac{\partial f}{\partial t} = -v(n \cdot \nabla_r) f - \frac{v}{l} f + \frac{vc}{l} \int f(r, n', t) dn', \quad (1)$$

where r is the radius vector of the particles, n is the unit velocity vector, l is the free path length, and c is the number of secondary neutrons for one collision.

Card 1/3

L 53606-65

ACCESSION NR: AP5009388

The function $f(r, n, t)$, a solution of the Cauchy problem for equation (1) under the initial condition $f(r, n, 0) = f_0(r, n)$, satisfies the relation

$$f(r, n, t) = f_0(r - nvt, n) e^{-un} + \frac{c}{4\pi} \int_0^{vt} \int_n^{\infty} f(r - nu, n', t - \frac{u}{v}) e^{-un'} \frac{du}{l} dn'. \quad (2)$$

For a particle density $F(r, t) = \frac{1}{4\pi} \int_n^{\infty} f(r, n, t) dn$, we obtain

$$F(r, t) = \frac{1}{4\pi} \int_n^{\infty} f_0(r - nvt, n) dn e^{-un} + \frac{c}{4\pi} \int_n^{\infty} dn \int_0^{vt} f(r - nu, t - \frac{u}{v}) e^{-un} \frac{du}{l}. \quad (2')$$

Series expansion of the second integral of (2') is carried out in order to investigate the asymptotic behavior of $F(r, t)$ under the conditions

$$F(r) = \frac{c}{4\pi} \int_n^{\infty} dn \int_0^{\infty} f(r - nu) e^{-un} \frac{du}{l}. \quad (3)$$

Card 2/3

L 53606-65

ACCESSION NR: AP5009388

It is first established how closely $F(r, t)$ can be approximated by the solution of the equation

$$\frac{\partial \Phi}{\partial t} = D \Delta \Phi - \frac{D}{L_0^2} \Phi,$$

Then its approximation by the solution of the following equation is investigated:

$$\frac{\partial \Psi}{\partial t} = D \Delta \Psi + r \left(\frac{1}{3D} \frac{\partial^2 \Psi}{\partial r^2} + \frac{3D}{5} \Delta^2 \Psi - \Delta \frac{\partial \Psi}{\partial t} \right).$$

Finally, estimates are obtained for the time derivative, and expressions for neutron flux are derived. "In conclusion, I take this opportunity to express my deep gratitude to A. N. Tikhonov for his valuable advice and constant attention to my work." Orig. art. has: 117 formulas.

ASSOCIATION: none

SUBMITTED: 26Sep64

ENCL: 00

SUB CODE: NP, MA

NO REF SOV: 005

OTHER: 002

640.

Card 3/3

ACC NR: AP6025923

SOURCE CODE: UR/0208/66/006/004/0699/0705

AUTHOR: Rakhmatulina, A. Kh. (Moscow)

ORG: none

TITLE: On the asymptotics of a source function for a transfer equation

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 4, 699-705

TOPIC TAGS: transfer equation, neutron scattering, approximation method

ABSTRACT: In the case of isotropic scattering of neutrons when there is no absorption or multiplication of particles the neutron transfer equation in the approximation of constant sections (single-velocity problem) has the form

$$\frac{\partial f}{\partial t} = -vn\nabla_r f - \frac{v}{l}f + \frac{v}{l} \frac{1}{4\pi} \int f(r, n', t) dn', \quad (1)$$

where r is the radius vector of the particles; v is velocity; n , the unit velocity vector; $f(r, n, t)$ is the distribution function of neutrons in space ($r \times n$); and l is the length of the mean free path. The function $f(r, n, t)$ is a solution to the Cauchy problem for Eq. (1) with the initial condition $f(r, n, t) = f_0(r, n)$ and satisfies the relationship

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UDC: 517.9:533.9

ACC NR: AP6025923

$$(r, n, t) = f_0(r - nvt, n) e^{-v/n} + \frac{1}{4\pi} \int_0^t \int_{\Sigma} f(r - nu, n', t - \frac{u}{v}) e^{-u/v} \frac{du}{u} d\Omega'. \quad (2)$$

The solution of the diffusion equation

$$\frac{\partial \Phi}{\partial t} = D \Delta \Phi, \quad (3)$$

where $D = \frac{1}{3} lv$, is used as an approximation for function $F(r, t)$. Approximation of $F(r, t)$ by Eq. (3) is termed the diffusion approximation. An earlier work by the author (Zh. vychisl. matem. i matem. fiz., 1965, S, No. 2, 218-235.) showed how the solution to Eq. (3) approximates $F(r, t)$ with a certain accuracy in two common cases of initial conditions. The purpose of the present work is to study the problem of applicability of the diffusion approximation to a wider class of initial conditions than treated in the previous work. Therefore it is important to study the source function (in the case where initial distribution does not depend on n). In conclusion, the author expresses his gratitude to A. N. Tikhonov for stating the problem and discussing the work. Orig. art. has: 12 formulas.

SUB CODE: 12, 20/ SUBM DATE: 24Sep65/ ORIG REF: 005/ OTH REF: 002
Card 2/2

RAKHMATULINA, E.K.

Some data on mosses in moist habitats of the western Tien Shan
(the central belt). Uzb. biol. zhur. 8 no.5:67-70 '64
(MIRA 18:2)

1. Institut botaniki AN UzSSR.

1. The purpose of this study is to determine the effect of the

2. The results of the study are as follows:

PASHCHENKO, V., nauchnyy sotrudnik; SHTEYNIKOVA, Ye., nauchnyy sotrudnik;
RAKHMATULINA, M., nauchnyy sotrudnik

Efficient complex of measures. Zashch. rast. ot vred. i bol
10 no.9:19-22 '65. (MIRA 18:11)

1. Institut sadovodstva, vinogradarstva i vinodeliya im.
R.R. Shredera.

BAKSHTANSKAYA, R.S.; RAKHMATULINA, M.D., inzh., nauchno-tekhn. red.;
RODOVSKAYA, M.V., nauchno-bibl. red.; RODOVSKAYA, M.V., otv. za
vypusk; USENKO, L.A., tekhn. red.

[Mechanization and automation of operations in locomotive operation, maintenance and repair in the U.S.S.R. and foreign countries; bibliography of Soviet literature, 1957-1960] Mekhanizatsiia i avtomatizatsiia v lokomotivnom khoziaistve v SSSR i za rubezhom; bibliograficheskii ukazatel' otechestvennoi literatury, 1957-1960 gg. Moskva, Transzheldroizdat, 1961. 38 p.
(MIRA 15:5)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya.
TSentral'naya nauchno-tekhnicheskaya biblioteka.
(Bibliography--Locomotives--Maintenance and repair)

RAKHMATULLINA, H. K.

Seasonal and age-related dynamics of the Coccidium infection
of geese. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no. 3: 74-79
My-Je '65. (MIRA 18:9)

L 22549-66

ACC NR: AP6004843

SOURCE CODE: UR/0404/65/000/003/0074/0079

AUTHOR: Rakhmatulina, N. K.

ORG: none

TITLE: The relation of seasonal and age dynamics to *coccydnia* in geese

SOURCE: AN KazSSR. Izvestiya. Seriya biologicheskikh nauk, no. 3, 1965, 74-79

TOPIC TAGS: animal disease, infective disease

ABSTRACT: The investigation was undertaken in order to establish the age and seasonal dynamics of *coccydnia* in geese in Kazakhstan and to determine the species involved. In the study, two species--*Eimeria nocens* and *E. truncata*--were found to be present. Gooslings became infected at the age of 15 days. The greatest degree of infection (60%) for both species of *coccydnia*, was found in month old gooslings. Thereafter, the degree of infection dropped to 43% at the age of two months, reaching a low of 10.6% at six months. While both species attacked the newborn gosling, differences appeared with age; thus up to three months the incidence of *E. nocens* was higher than *E. truncata*. The incidence of *coccydnia* was highest in May (60%), 44.7-37% in June and July and reached a low of 6.8% during December-February. It is concluded that temperature and humidity are the prime factors underlying *coccydnia* in geese. Orig. art. has: 3 figures.

SUB CODE: 06/

SUBM DATE: 00/

ORIG REF: 011/

OTH REF: 003

Card 1/1 *BK*

S/061/61/000/017/023/166
B102/B138

AUTHOR: Rakhmatullayev, Kh.

TITLE: Chrompicotite and fuchsite from Central Kyzylkum

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 100,
abstract 17P58 (Uzb. geol. zh., no. 5, 1960, 45 - 49)

TEXT: The minerals were found during the process of dealing with stony materials of the Sb ore manifestation in Kokpatas. Their X-ray pictures and results of optical, incomplete chemical, and semi-quantitative spectrographic analyses are given. To clear up the genesis of the minerals, the relative Cr content (semi-quantitative spectrographic method) was investigated in various rocks of the region. Rocks of basic composition and metasomatically varied formations were enriched in Cr to a higher degree. It is suggested that Cr is born by gaseous-aqueous solutions out of unbared erosions of magmatic formations of ultrabasic composition. In the final analysis hydrothermal solutions also promote the sedimentation of chrompicotite in kaolinized rock. Fuchsite occurs later than chrompicotite, in the presence of hydrothermal solutions, but

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S/081/61/000/017/023/166
B102/B138

Chrompicotite and fuchsite...

as a result of the postmagmatic activity of acid granite intrusion. The
Cr in fuchsite may be partially derived from chrompicotite. [Abstractor's
note: Complete translation.]

Card 2/2

RAKHMATULJAYEV, Kh.

Chrompicotite and fuchsite from the central Kyzyl Kum. Uzb. geol.
zhur. no.5:45-49 '60. (MIRA 13:11)

1. Institut geologii AS UzSSR.
(Kyzyl Kum--Chrompicotite)
(Kyzyl Kum--Fuchsite)

RAKIMATULLAYEV, R.S.; RUZMATOV, S.R.; KAYUMOV, I.Y.

Tellurium-tinmith mineral from the central Kray. Izv. geol. zhur.
8 no. 3:72-73. '64.

1. Institut geologii i geofiziki imeni Akhmed'yeva AN USSR.
Submitted Sept. 12, 1963.